Short Research Article

ORCHID: The need for research and instruction at all levels, from the global to the neighborhood orchid society

Abstract:

The most exquisite flowers and long-lasting qualities of ORCHIDS make them among God's creations regarded as the most beautiful in the entire world. They are perennial herbs that are members of the Orchidaceae family. In addition to hybrids regularly created, there are reported to be nearly 25000 orchid species spread across 730 genera. Epiphytes include orchids, which are plants that grow on trees. Terrestrial refers to those that grow on the ground. Lithophytes are those that grow on rocks, while saprophytes are some relatively unknown ones that grow on decomposing matter or rotting logs. A few orchid species can grow partially submerged in water, with only the inflorescence occasionally reaching the surface.

Introduction:

Orchid is a flowering plant that used as an ornamental purpose as well as cut flower in Indian market. Orchid belongs to the family Orchidaceae and they are perennial herbs having 25000 species spreading over the 730 genera widely cultivated over the world. Some of the species are spreading over the plant called epiphytes some are growing in ground called terrestrial, some are growing in rocks known as lithophytes, some are growing on decaying matter known as saprophytes. Some orchids grow in semi-aquatic environments, submerged in water, and occasionally just the inflorescence is visible above the surface.

Orchids are consider as a very beautiful creation of the God it having long keeping quality and this flower is also very popular in Hindu worshiping. This flower's beauty is presented to Lord Shiva.

Depending on the sort of vegetative growth they exhibit, orchids have one of two types of growth habits:

Monopodial:

This type features a single, upward-growing, non-branching stem that becomes longer as the seasons change, like Vanda and Arachais.

Sympodial:

This kind has a horizontally growing rhizome that produces new growth. A clump of shoots of various ages and sizes can be found on a fully established sympodial plant. Each axis stops growing at the conclusion of each flowering season.

For instance, Dendrobium, Cattleya, Oncidium, and Cymbidium Thus, over time, a single plant will grow a number of annual axes.

Season after season, an orchid plant can occasionally grow both vertically and horizontally at the same time.

The term "pseudomonopodials" applies to these.

Climate:

Moving Air

The majority of domesticated orchids are air plants, and as such, they need a lot of room for air to travel freely. It aids in keeping humidity and temperature at optimal ranges. The location may be changed for adequate air circulation if grown in a greenhouse or shade house.

Because hanging baskets receive more air circulation than pots or benches do, varieties like Vanda, Aerides, and cattleyas thrive in them.

Light

For orchids to grow proper, light is crucial. They enjoy diffused sunlight in general. The leaves will burn if you keep them in direct sunlight, though. The right amount of light promotes healthy development and nutrient storage, which in turn supports the blooming cycle. The plant needs to be relocated to a more shaded area if the leaves start to turn yellow. At the tips of leaves or in folds, sudden brown splotches or orange patches appear when the heat is too much. Sometimes the plants darken their foliage with plum coloured pigments. This is known as Suntan. It may take the form of spot or the whole leaf may darken. In this ways the plant protects itself from burning. The optimum requirement:

Growing period: 5000 - 8000 lux

Flowering period: 8000 - 15000 lux

Heat:

According to their need for heat, heat orchids are divided into three groups: cold orchids for temperate climates, intermediate orchids for subtropical climates, and hot or warm orchids for tropical climates. Tropical orchids are ideal for Goa conditions, where daytime highs range from 180 to 360 degrees Fahrenheit.

Humidity

The ideal humidity for orchids is between 60% and 80%. Orchid overwatering is not advised. The length of time between watering's also depends on the planting medium.

The interval between watering is longer if moss or bark is utilized since it holds a lot of moisture. Compared to plants cultivated in pots, plants in baskets require more frequent watering. The watering interval should be less frequent in gloomy and monsoon weather than in the summer.

Table 1. A FEW ORCHIDS FOR INDIA'S CULTURE

A- DENDROBIUM		
SR.NO.	VARIETY	COLOR
1	New SONIA Bom	Dark purple
2	SONIA 17M	Dark purple
3	SONIA RED	Purple
4	GENTING CASINO	Purple
5	BURANA JADE	Green
6	SAKURA PINK	LIGHT PINK
7	BOONCHOO GOLD	YELLOW RED LIP
8	GENTING SUPREME	BLUE
9	AHULANI HINOJOSA	BROWNISH ORANGE
10	KYOMI BEAUTY	DARK PINK
11	BURANA GREEN	GREEN
B- ONCIDIUM		
1	ONC GOWER RAMSEY	YELLOW
2	ONC. Taka	YELLOW
3	ONC. SHARON BABY	PINK WITH SPOTS
C- MOKARA		
1	MK CHARK KUAN	PINK, ORANGE, RED
2	MK NEW NORA BLUE	BLUE
D- ARANDA		
1	ISKANDER	YELLOW
2	CHRISTINE ALBA	WHITE/RED SPOT
OTHERS		
1	KGW CHRISTIE LOW	RED
2	KGW SANDY GOLD	ORANGE, RED SPOTS
3	VANDA MARLIE DOLERA	PURPLE

A- DENDROBIUM:

PIC-1 DENDROBIUM

In the family Orchidaceae, the genus Dendrobium contains mainly epiphytic and lithophytic orchids. Throughout much of south, east, and southeast Asia, including China, Japan, India, the Philippines, Indonesia, Australia, New Guinea, Vietnam, and many of the Pacific island nations, it is a very large genus with more than 1,800 species that can be found in a variety of habitats.

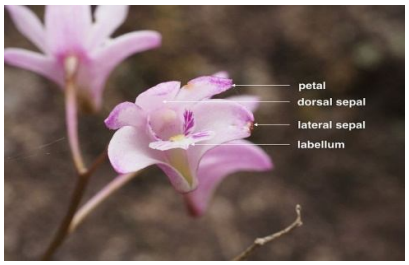
B- ONCIDIUM

Although some species in the genus are lithophytes (growing on rocks) or terrestrials, the majority of species are epiphytes (growing on other plants) (growing in soil). They are widely distributed throughout South America, the Caribbean, and northern Mexico. They typically appear where it is dry throughout the year.

PIC-2 ONCIDIUM

C- MOKARA:

Actually, mokara orchids are a cross between three different orchid species (Ascocentrum, Vanda and Arachnis). They were created in the late 1960s and are currently among the most well-liked orchids available. They feature a few defining characteristics: 1) A good differentiator is having thicker stems.



PIC-3 MOKARA

D- ARANDA

Aranda, shortened in trade publications. Aranda is a cross between the genera of orchids Arachnis and Vanda (Arach x V).

PIC-4 ARANDA

Method of planting:

For terrestrial orchids, media made up of one part rich humus with decomposed leaf mould, half a part decomposed and dried compost, one part sphagnum moss or coir pit mixture, and one part of a mixture of the two must be prepared, and ideal drainage must be guaranteed. This mixture is poured into earthenware pots or beds. At the bottom, there should be enough drainage material. Plants need to be staked, and the area should be sunny.

Numerous growing media are used for epiphytic orchids, including the ones listed below.

COCONOT HUSK:

Coconut husk is readily available, inexpensive, and capable of absorbing a sizable amount of moisture. Husk proportion needs to be adjusted to prevent the media from becoming soggy.

BRICKS AND TILES

They are great for drainage because they absorb and hold moisture.

CHARCOAL:

In addition to being convenient and secure when planting an orchid, charcoal is useful for cleaning the media. Before adding the potting mixture and the plant, which needs to be staked, large pieces of potting material are placed close to the drainage hole. The same level of care should be taken when growing in beds. For planting orchids, special clay pots with holes are available. Additionally, plastic containers are the best because they are lightweight and prevent algae from growing on their sides. Due to their limited capacity for vertical growth, wooden baskets are used specifically for Vandas. In the event of commercial cultivation, raised platforms are built for the placement of pots.

NUTRIENT MANAGEMENT:

The types of nutrients, their quantity, and how often they are applied depends significantly on the variety of orchid, the potting medium, the time of year, the growing environment, the stage of growth, etc.

During the first two week of growth, a fertilizer mixture containing NPK in the ratio of 1:1:1 is necessary. During the pre-flowering stage and the flowering stage, mature plants require feedings in the ratios of 3:1:1 and 1:2:2, respectively. In addition to bone meal, which can be sprayed at intervals of 2 to 3 times per week under tropical conditions, organic manures like slightly fermented solutions of oil cakes (1:10), cattle manure (1:25), and cow's urine (1:25 dilution) are also very suitable.

For foliar application, a fertilizer blend with both major and minor nutrients is ideal as most.

WATER MANAGEMENT:

Management of water resources: Because orchids are grown on very porous soil, it's crucial to sprinklers are used to water the crown portion. There must be no contaminants or hazardous chemicals in the water.

The amount of water that plants need depends on the climate, the substrate, and the age of the crop. The irrigation system must be able to deliver between 5 and 12 liter of water per square metre per hour. It is crucial to make sure that plants have access to the proper drainage.

PLANT PROTECTION:

Because they are tough plants, orchids can withstand significant environmental stress and are resistant to pests and diseases. Stress has a connection to water as its primary cause.

They rot because of excess moisture brought on by overwatering or bad drainage. Scales, mealy bugs, and other insects are attracted to plants with inadequate moisture in the roots or the atmosphere. Occasionally, if the leaves aren't washed, a population of spider mites will erupt on their dusty surfaces. Flowers and leaves cannot withstand prolonged wetness because it promotes bacterial and fungal infections. By keeping the plants and growing area clean, the issues can be avoided. As soon as you see plant material that is dead, cut it the dead leaves.

POST HARVEST:

When the orchid blooms, the flower stem is supported by a stick. buds begin to swell. The flower spikes are harvested when the The last flower is still in the bud stage

6 to 7 stems per plant produce an average amount of flowers each year.

AFTER HARVEST & PACKAGING:

Stems are kept in buckets filled with water and kept at a temperature between 7 and 100 C after harvest. Depending on the variety and climate, the vase life can range from 5 days to 6 weeks.

The 100x15x11.5cm single-use boxes that hold the flowers have been used only once. Between 25 and 30 stems are packed per box, depending on how many flowers are on each stem.

CONCLUSION:

A remarkable place in contemporary culture has been taken by flowers. As a result, there is a latent demand for flowers, particularly for orchids because of their excellent preservation and wide range of flower shape and colour options.

The growers can run the project to a successful conclusion in a short gestation period thanks to their experience in managing successful businesses in the agricultural and other industrial sectors as well as their ability to draw on the expertise of other experienced growers.

The companies' plans to export a portion of their products to countries with steady markets bode well, and the timing couldn't be better given how well the Indian floriculture industry has developed over the past ten years.

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